

Application No. 10/042,373
Reply to Office Action of 06/15/2005

Attorney Docket No. 10287.48
Customer No. 27683

REMARKS

STATUS OF CLAIMS

Claims 22 and 23 have been canceled. Claims 24-26 and 28-33 remain in the application unchanged, and are the claims currently presented for examination. The claim amendments do not necessitate the payment of any additional filing fee. Applicants respectfully request reconsideration of this application in light of the above amendments and the following remarks.

ALLOWABLE SUBJECT MATTER

With reference to the present Office Action, Applicants note with appreciation the indication on page 7 that Claims 24 and 29-30 have been allowed. It is noted that these allowed claims are subject to a rejection for indefiniteness under the second paragraph of §112. However, for reasons discussed below, Claims 24 and 29-30 are all believed to be in compliance with the second paragraph of §112. Accordingly, it is believed that all issues have been resolved in regard to Claims 24 and 29-30.

Claim 32 depends from allowed Claim 24. The Office Action sets forth a rejection of Claim 32 under 35 U.S.C. §102, but this is obviously an inadvertent error. In particular, since Claim 32 depends from allowable Claim 24, Claim 32 should also be allowable, for the same reasons as Claim 24. Notice to that effect is respectfully requested.

SECOND PARAGRAPH OF 35 U.S.C. §112

The Office Action rejected Claims 24 and 25 under the second paragraph of 35 U.S.C. §112 as indefinite, asserting that the phrase "capable of" is indefinite because it is not clear what is being modified for the carriers to be capable of holding micro-substances and remote-acting bodies. Applicants respectfully disagree. Claims 24 and 25 each recite that there are "a plurality of holes, cavities, concavities or convexities that are sized to be capable of holding the micro-substances and the remote-acting bodies" (emphasis added). In other words, it is the selected size of the holes, cavities, concavities or convexities that causes the holes, cavities, concavities or convexities to

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be "capable of" holding micro-substances and remote-acting bodies. Accordingly, it is respectfully submitted that there is nothing indefinite about the use of the phrase "capable of" in Claims 24 and 25.

The Office Action also rejects Claims 24 and 25 under the second paragraph of §112 on a different ground, asserting that it is not clear how the carrier does the holding with agitation, because agitation should dislodge items from the carrier if there is no structure that can hold the remote-acting bodies and the micro-substances. However, Claims 24 and 25 do recite structure to hold the remote-acting bodies and the micro-substances. In particular, Claims 24 and 25 each recite "a plurality of holes, cavities, concavities or convexities that are sized to be capable of holding the micro-substances and the remote-acting bodies". As discussed in lines 18-23 on page 7 of the specification, a mechanical force such as friction is one way to hold micro-substances and remote-acting bodies within holes, cavities, concavities or convexities of the carrier. The holes, cavities, concavities or convexities of the carrier are thus given suitable sizes so that micro-substances and remote-acting bodies will be held therein by inherent friction. The agitation recited in Claims 24 and 25 serves to increase the rate at which micro-substances and remote-acting bodies encounter and move into the holes, cavities, concavities or convexities of the carrier. The inherent friction then tends to hold them there, despite the ongoing agitation. So the agitation does more to promote than defeat the holding of micro-substances and remote-acting bodies within the holes, cavities, concavities or convexities of the carrier. It is therefore respectfully submitted that there is nothing indefinite about the recitation in Claims 24 and 25 that agitation promotes holding of the micro-substances and the remote-acting bodies within holes, cavities, concavities or convexities of the carrier.

FIRST PARAGRAPH OF 35 U.S.C. §112

The Office Action rejected Claims 24 and 25 under the first paragraph of 35 U.S.C. §112 in a new ground of rejection, asserting that Claims 24 and 25 fail to comply with the written description requirement because the specification fails to teach that remote-acting bodies and micro-substances can be "independently" held in the holes,

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cavities, concavities or convexities of a carrier. This ground of rejection is respectfully traversed, for the following reasons.

Claim 24 does not include any recitation that remote-acting bodies and micro-substances can be "independently" held in the holes, cavities, concavities or convexities of a carrier. (Claim 25 is the only pending claim that includes this language). Accordingly, the rejection is not applicable to Claim 24. It is therefore respectfully submitted that Claim 24 is in compliance with the first paragraph of §112.

As to Claim 25, and as discussed above, the holes, cavities, concavities or convexities of the carrier can be sized so that a mechanical force such as friction holds micro-substances or remote-acting bodies there. The holding of micro-substances and remote-acting bodies to the carrier is not dependent on some additional structure or some external force. Therefore, it is an inherent characteristic that the remote-acting bodies and micro-substances are independently held in the holes, cavities, concavities and convexities of the carrier. Accordingly, it is respectfully submitted that the recitation in Claim 25 of "independently" holding does not constitute the recitation of something that goes beyond the original written description, because it is merely an inherent characteristic of what was in fact expressly described.

INDEPENDENT CLAIM 25

Independent Claim 25 stands rejected under 35 U.S.C. §102 as anticipated by Forrest US Patent No. 4,659,678. This ground of rejection is respectfully traversed. The PTO specifies in MPEP §2131 that, to anticipate a claim, a reference must teach every element of the claim. In the present application, Claim 25 has limitations that recite:

pouring remote-acting bodies which can be
positionally manipulated by a remote force, micro-
substances including a target substance of an assay, and
carriers having surfaces with a plurality of holes, cavities,
concavities or convexities that are sized to be capable of

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holding the micro-substances and the remote-acting bodies,
into a liquid or a gas in accordance with a predetermined
order,

making the remote-acting bodies and the micro-
substances be independently held in the holes, cavities,
concavities or convexities in the surfaces of the carriers by
simultaneously agitating the remote-acting bodies, the micro-
substances, the carriers and the liquid or gas, . . .

Forrest does not teach that holes, cavities, concavities or convexities in a carrier could be specifically sized so as to be capable of holding micro-substances and remote-acting bodies. As to remote-acting bodies, Forrest does not teach exactly how his remote-acting bodies are held to the cellulose carriers and, more specifically, lacks any teaching that his cellulose carriers have holes, cavities, concavities or convexities that are specifically sized to facilitate holding of remote-acting bodies. Similarly, as to micro-substances, Forrest lacks any teaching that his cellulose carriers have holes, cavities, concavities or convexities that are specifically sized so as to be capable of holding micro-substances. Instead, Forrest teaches that his micro-substances are held with respect to the carrier by covalent bonds, and so the sizing of any holes, cavities, concavities or convexities is irrelevant. In contrast, Claim 25 expressly recites carriers with "a plurality of holes, cavities, concavities or convexities that are sized to be capable of holding the micro-substances and the remote-acting bodies".

Claim 25 also recites "making the remote-acting bodies and the micro-substances be independently held in the holes, cavities, concavities or convexities in the surfaces of the carriers by simultaneously agitating the remote-acting bodies, the micro-substances, the carriers and the liquid or gas" (emphasis added). In other words, the remote-acting bodies and the micro-substances are simultaneously made to be held in holes, cavities, concavities or convexities of the carriers, through simultaneous agitation. In contrast, the carriers (cellulose) of Forrest already contain the remote-acting bodies (magnetic ferric oxide) before the carriers are ever exposed to any micro-

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substances. Thus, the remote-acting bodies and the micro-substances do not become coupled to the carrier simultaneously, much less by simultaneous agitation. And when the carriers of Forrest eventually are exposed to the micro-substances, the micro-substances end up being held with respect to the carriers by covalent bonds, rather than as a result of being held within specifically sized holes, cavities, concavities or convexities. Further, after components are mixed, Forrest focuses on incubating the mixture, and does not appear to contain any specific teaching of agitating the mixture, much less that agitation would act to facilitate holding of micro-substances and/or remote-acting bodies to carriers. Apparently, the covalent bonds that hold the micro-substances are satisfactorily formed without any need for agitation.

To support the rejection of Claim 25 under §102, the Forrest patent must disclose each and every element recited in Claim 25. As discussed above, the Forrest patent fails to do so. Therefore, Forrest does not anticipate Claim 25 under §102. Claim 25 is thus believed to be allowable, and notice to that effect is respectfully requested.

DEPENDENT CLAIM 33

Dependent Claim 33 stands rejected under 35 U.S.C. §102 as anticipated by Forrest. This ground of rejection is respectfully traversed. Claim 33 includes a recitation of:

configuring the carriers so that the holes, cavities,
concavities or convexities are large enough to allow the
magnetic particles to undergo orientation therein in response
to the magnetic field.

The Office Action notes that Forrest applies a magnetic field that will tend to urge Forrest's magnetic particles to reorient. However, that does not mean that Forrest's magnetic particles are capable of reorienting relative to the carrier on which they are supported, and Forrest has absolutely no teachings of this particular capability.

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Accordingly, Claim 33 is believed to be patentably distinct from Forrest, and notice to that effect is respectfully requested.

OTHER DEPENDENT CLAIMS

Claims 26, 28 and 31 depend from Claim 25, and are also believed to be allowable, for example for the same reasons discussed above with respect to Claim 25.

CONCLUSION

Claims 24-26 and 28-33 are under consideration in the present application. In view of the foregoing amendments and remarks, allowance of all pending claims is respectfully requested. The Examiner is invited to call the undersigned at the below-listed telephone number if, in the opinion of the Examiner, such a telephone conference would expedite or aid the prosecution and examination of this application.

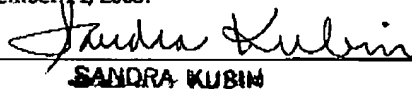
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